STRONGBOY INSTRUCTION RESEARCH
3rd Edition
(Carried out by Anthony Lundie)

Due to the tasks of masonry alterations being totally different, it is not possible for only one test and one set of instructions to be adequate for the four different products which have two different tongue lengths and when the manufacturer claims they can safely support walls from 100mm to 300mm.
Further testing & research is required to ensure the instructions are sufficient for every task the manufacturer claims they do.

BELOW IS AN EXAMPLE OF HOW INSTRUCTIONS FOR DIFFERENT PRODUCTS SHOULD BE PRESENTED.

Proppa Is a similar designed Australian masonry support product and to avoid confusion they show the different instructions of both products, as set out below;

PROPPA® masonry wall supports

Instructions for use

Please make sure you select the correct instructions for your model of the Proppa® by clicking on the related image below.

New model released July 2012

Proppa Instructions (New Model) (2219 KB)

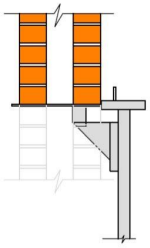
Previous model

Proppa Instructions (Old model) (117 KB)

OLD & NEW STRONGBOY INSTRUCTIONS RESEARCH
(Colour Code)
OLD INSTRUCTIONS
NEW INSTRUCTIONS
MY RESEARCH

1. Select the height you require for your opening and take out one or two bricks above the joint you wish to work to.
Scrape or grind out the mortar, or remove a brick prior to insertion of the Strongboy in the identified position.

When supporting a cavity wall correctly, three brick courses are to be removed as seen in the drawing below. The misleading wording of the new instructions increases the risk of the user to overload a Strongboy through over extending away from the wall.



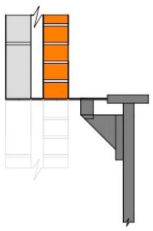
3. For maximum safety the STRONGBOY should be placed where the handle sits against the face of the wall being supported.
There is no equivalent guidance within the new instructions.

4. On normal cavity walls, the maximum distance from the the centre line of the 'acrow' prop, to centre line of the cavity wall or is 215mm (9" inches). Or using the leading edge of the hammer plate as a guide. Measure 150mm to the centre of the cavity.

The Strongboy can be use on single or double skin walls where each leaf is up to 4 ½" (112mm) thick. If double skin, the maximum cavity is 2" (50mm). Ensure the blade of the Strongboy is fully supporting the second skin.

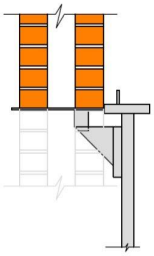
The 340kg safe working load of the traditional Strongboy is calculated from the maximum eccentricity of 215mm which is the maximum measurement from the centre line of the Acrow prop to the centre line of the cavity wall. Where the eccentricity is more than 215mm safe working load reduces to an unknown quantity.

Within the new instructions there is no mention of the maximum eccentricity. Strangely, all measurements within the new instructions are taken from the end of the oversized tongue, "If" this was a correct method to measure eccentric loads it is actually safer to support a 100mm cavity wall, (which is now not permitted) than supporting a 50mm cavity wall (which is permitted) as the measurement from the centre line of the Acrow prop to the centre line of the propped wall is 55mm greater on average and can be a staggering 150mm greater when using the XLStrongboy, as seen below.



Total Eccentricity from centre of Acrow prop to the centreline of the 50mm cavity is now a staggering 365mm which is 150mm more eccentric than the old instructions and without any further testing or explanation.

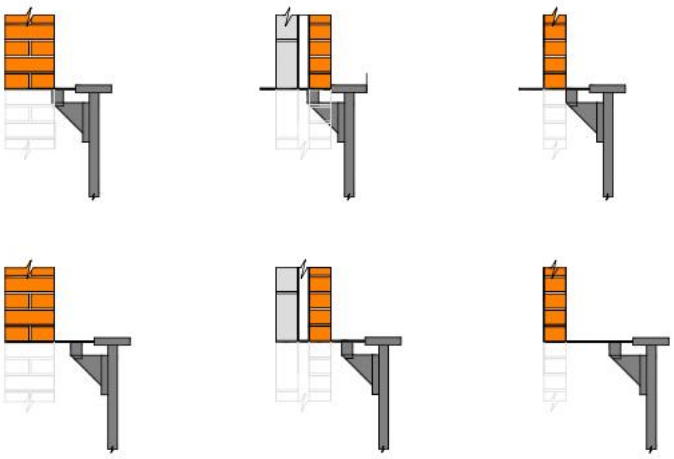
The drawing below is showing the "standard" Strongboy supporting a 100mm cavity wall at 215mm eccentricity from the centre line of the Acrow prop to the centre line of the cavity wall as recommended within the old instructions and is far safer than the new instructions.



When the 215mm measurement is exceeded the safe working load of an Acrow prop fitted with a Strongboy reduces to an unknown quantity.

The three top drawings below show the correct way to prop masonry within the old instructions and the three lower drawings show how the new XL Strongboy will be used within the new instructions.
The eccentricities are increased by over 50%;
9" wall = 75mm further eccentricity
50mm cavity wall = 140mm further eccentricity

4” wall = 135mm further eccentricity



N.B. (Where joints do not line up in a cavity wall you may need to insert a suitable solid wedge between the loading plate and the supported structure.)

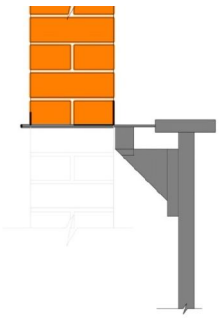
The N.B instructions are not within the new instructions and should be added to avoid the risk of collapse through incorrect propping of two different skin heights which is a very common problem.

5. On single leaf walls the maximum distance from the centreline of the 'acrow' prop to the centreline of the wall should be 305mm. (12 inches)

Insert the blade at least at the same depth as the rear of the brick on the leaf of the wall which is intended to be supported. Where possible the Strongboy should be inserted until the tip of the web is nearly touching the wall.

Without further testing the new instructions increase the eccentricity & suggest it is safe to support a 100mm thick wall at a minimum 354mm eccentricity and a 215mm thick wall at a minimum of 295mm which is deceiving to the unaware user and induces further risk of overloading.

There has never been any clear guidance of supporting 9” walls!



6. Tighten the prop until the loading plate is fully engaged with the brickwork and is load bearing. (DO NOT OVERTIGHTEN)

When a Strongboy is over tightened there is a high risk of the inner tube of the Acrow prop curving as an Acrow prop is designed only for concentric loads from the head plate down to the foot plate and a warning of this should be in place with a correct procedure of what to do if an Acrow prop deflects or curves, (as within the Australian Proppa instructions).

7. For wider hole on stable walls the STRONGBOYS should be positioned and maximum of 900mm apart.

The above misleading guidance is why I complained to the HSE back in 2014, although now changed within the new instructions, no warning of the changes were sent out to previous purchasers and I believe the damage is already done and still needs to be addressed, possibly in the same manner as faulty electrical goods are dealt with.

8. The maximum safe working height is 3m from finished floor level.

When no guidance is provided by the HSE it is common practice to learn from the internet and the majority of You Tube videos & Google images still show Strongboy's being used over this height, even by so-called experts and should be addressed by the HSE through doing small demonstration videos.

9. Maximum safe working load is 340 Kg

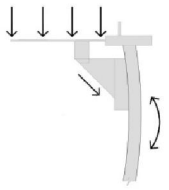
Further guidance is required to ensure the user is aware that the Acrow prop is dangerously misused and the safe working load is severely reduced by at least 90%, from 3400Kg down to the maximum340Kg at 215mm eccentricity and can reduce even further depending on the working height and the size of the Acrow prop used, how plumb and how far the Acrow prop is fitted from the centre line of the wall. I would also like further research into the XL Strongboy's safe working load when supporting a 300mm wide cavity wall.

Check that the prop is not working loose on a regular basis – eg continuously while the opening is being made, otherwise daily.

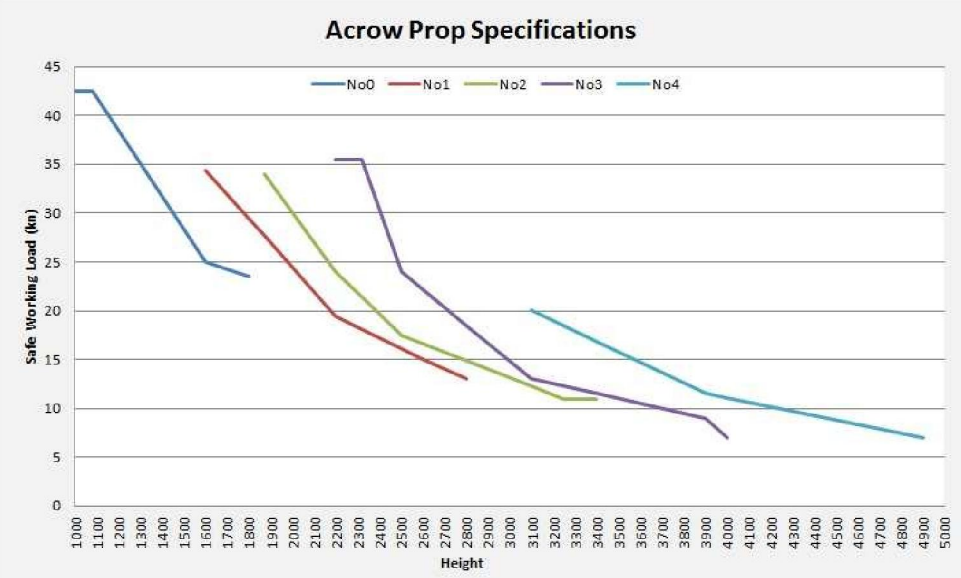
A Strongboy should only be used on a temporary basis. Endorsing to check daily induces further misuse. Further equipment with a superior safe working load such as plumb and concentric Acrow props or similar should be used when work is not being carried out upon a task.

No Acrow prop guidance is included within the instructions even when there are four different sizes that can be used up to 3m of which varies the maximum safe working load considerably to an unknown quantity.

When eccentrically propping and the inner tube of the Acrow prop is raised over 50% from the outer tube, there is a higher risk of the Acrow prop curving therefore reducing the safe working load and a warning of this should be in place.



As seen in the graph below, the safe working load of an Acrow prop reduces when the inner tube of an Acrow prop is raised from the outer tube.



No correct procedures are in place for the different tasks of supporting 100mm walls, 9” walls or the different sized cavity walls.
There are no maximum opening sizes supplied even though false and misleading information within the instructions were in place for over twenty five years.

Conclusion

The misleading theory behind the Strongboy is to use fewer Acrow props and to reduce masonry damage and is marketed within that manner, which certainly is not the case when the maximum safe working load is only a fraction (1/5) of the correct propping and needling method (if used correctly) and when maintaining the 340kg safe working load the hole within both sides of the cavity wall or a 9″ wall is actually larger than fitting a needle and with at least five times more fitting holes required than one 1,700kg safe working load needle.

The Strongboy and its instructions are designed & written to deceive the user and both have created anti competitive practice within the market place through falsely easing a difficult and dangerous task.

The misleading old and new instructions have increased the risk of the user to underestimate the weight of the load and to overload the equipment through severe eccentricities and has also suppressed the true level of knowledge that is required to tackle the many different tasks of masonry alterations safely & correctly.

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Examples

A

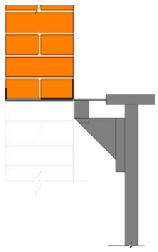
9″ brickwork can weigh over 600kg per square metre, (120 bricks plus mortar) which would require at least five Strongboy's per linear metre (at 167mm centre's) on a larger opening on a typical two storey residential property, which could weigh 1,440kg per linear metre without roof loads and making the use of Strongboy's unsuitable & obsolete for the particular task.

B

A Strongboy was designed in the mid 1980's when a typical cavity was only 50mm but due to changes in construction design a cavity has now doubled to 100mm and open plan living accommodation has increased opening sizes. Attempting tasks which require wider steels with welded top or bottom plates for large cavities and still only using Strongboy's is where further problems of overloading through over extending from the wall arise.

C

The new instructions (updated Nov' 2015) strangely suggest that propping an older style 9" wall by over 300mm eccentricity from the centre line of the wall to the centre line of the Acrow prop is acceptable even when the safe working load is reduced to an unknown quantity and when to avoid collapse the Strongboy is totally dependent on the unknown lateral strength of the lime mortar masonry.



D

The majority of tasks require far more fitting work space than the Strongboy can safely offer when still maintaining the maximum 340kg safe working load and when not dangerously removing the opening down to the full finished level without the permanent support being fitted as this increases the risk of collapse through accidental removal of loaded Acrow props during the demolition of the masonry. To reduce the risk of minor and major collapse only a few courses of masonry should be carefully removed to allow for the safe fitting of the permanent support. Once the permanent support is in the final position and

cured, the rest of the opening can then be removed down to the full finished depth.

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To change rules and instructions of a product can not be lawful when they dangerously increase eccentricities by over 50% which reduces the S.W.L to an unknown quantity and also endorses further misuse of which creates a higher risk of collapse.

To reduce the risk of collapse the Instructions should include something similar to;

Plan a task in advance as all tasks are different and ensure the Strongboy can give the correct fitting access to the job without the need to dangerously overload through removing further from the wall.

The Strongboy is not designed to avoid internal wall damage upon finished rooms when propping from the external side of a cavity or 9” wall.

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There are now approximately 15 companies and sole traders that sell similar designed products as the “Strongboy” with the majority being sold without the correct level of testing or written instructions of which both are required to comply with the provision and use of work equipment regulations and yet the H.S.E do nothing about it due to a “lack of staff”!

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The list of new companies and sole traders that manufacture copies will continue to grow and the quality will be sacrificed to become the least expensive if no instructions or tests are required and when the H.S.E do not police the problem in the correct manner.

Through our own professional research, we have discovered that no temporary masonry support equipment is safe to use unless provided with written guidance

at the point of sale/hire as this reduces the risk of misuse through making incorrect assumptions and is why we provide full instructions and a correct procedure with every product we sell.

As my right of freedom of information, I request a copy of all of the correspondence and work carried out between the Twf and the HSE regarding the testing and wording of the new Strongboy Instructions and I also request a copy of the written test results and all photographic evidence which would be required for the tests to be sufficient.

In their own words, the role of the HSE is to;
Provide advice, information and guidance, to raise safety awareness and to Inspect, investigate and to take enforcement actions.

In the past, I have been accused of exhausting the H.S.E complaints procedure when I have educated and shown the H.S.E the mistakes which they have made. I have offered my assistance but still the H.S.E only take advice from so called "learned" structural engineers that hide the fact the Strongboy is designed to deceive and to be misused.

The only thing to be exhausted is my trust and faith in the H.S.E as they are not competent enough to have any authority in a sector of the construction industry of which they know very little about then take advice from incompetent structural engineers that do not have the ability to research a temporary support product in a correct, safe or a professional manner.

Who police the structural engineers that are at fault, is it the H.S.E when they takes poor advice from Istructe and the Twf?

There is clearly a class system in place;

To please a client an architect has the artistic freedom to design & draw any new opening size they wish within existing masonry with a few lines and a rubber and with no care of how it is done in real life, a structural engineer can then provide a method of using Strongboy's which may save time by cutting corners but also compromises safety as the method doesn't give the correct fitting work space without dangerously overloading, the builder/contractor then purchase or hire Strongboy's to avoid internal wall damage of which is sold by a vast majority of retailers with zero masonry alterations knowledge and when the obvious accidents of overloading continue to reoccur only the

builder/contractor is at fault and fined or even imprisoned for corporate manslaughter

when collapse causes a fatality.

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MY RESEARCH SHOWS HOW A STRONGBOY IS DESIGNED TO DECEIVE AND TO BE MISUSED.

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The literature and cartoons upon the Strongboy Ltd website are misleading, induces misuse due to false claims and fuels further risk of collapse through overloading!

A

REDUCE DAMAGE

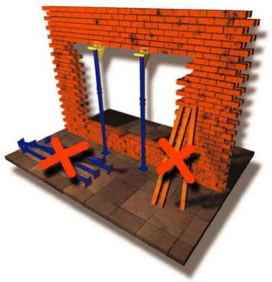
Because the STRONGBOY® Masonary support fits between mortar, you don't have to damage the brickwork above. Simply rake out the mortar or remove a brick beneath the level you wish to work and insert the STRONGBOY® Masonary support. Locate your Prop into position underneath it and you are ready to start.

Cartoon A

A cavity wall is propped with the correct method of props and needles but shows an extra hole to deceive and to de-value the author W.G.Nash's correct method of propping. The approximate safe working load of two sets of props and needles is 3,400 Kg. There is no need to prop with a needle one and a half brick away from a reveal even when no load-point exists. Two holes would be sufficient in this scenario.

B

USE LESS EQUIPMENT



The STRONGBOY® Masonary support will support a double or single skin, brick or block cavity wall, from either the inside or the outside. So you don't need any needles and only half the number of props.

Cartoon B

Two Strongboys fitted onto two Acrow's and propping from one side of the wall, please note; with both webs fitted under the wall to be within the 215mm

of eccentricity from the centre of the wall to the central axis of the Acrow prop. Maximum safe working load 680Kg when used with the correct sized Acrow prop. How will the lintel in question be fitted when both webs are impeding the required space to fit the permanent support?

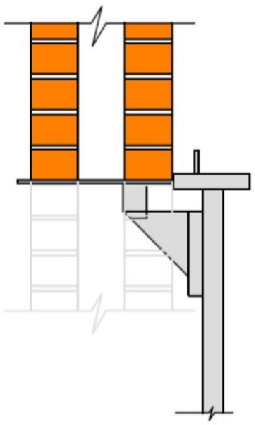
No Acrow props are shown internally which would be required when 1st floor joists rest onto the wall to safely support the different live and static loads they may be carrying, in that instance the equipment would be overloaded.

C

Cartoon C

Safety is paramount and must never be compromised to save time and money. Miraculously now showing the lintel already inserted, (effectively by one man) and with the webs of both Strongboy's now sitting outside of the wall.

D



To avoid both webs from impeding the fitting area, the correct method of using Strongboy's within this scenario would be to raise the tongue of the prop attachment three courses higher than what is shown in cartoon B and fitted as the above in drawing D. However when used to support a cavity wall or a 9" wall the attachment doesn't safely support the three courses of brickwork below and to the sides of the fitted tongues which causes the same damage to

the existing masonry as the correct method of the props and needles, making the Strongboy unsuitable for the task.

The misleading theory behind the Strongboy is to use fewer Acrow props and to reduce masonry damage and is marketed within that manner, which certainly is not the case when the maximum safe working load is only a fraction (1/5) of the correct propping and needling method and when maintaining the 340kg safe working load the hole within both sides of the cavity wall or a 9″ wall is actually larger than fitting a needle and with at least five times more fitting holes required than one 1,700kg safe working load needle.

Claims

The manufacturer claims the device is designed not to damage the brickwork but for the device to be used correctly, holes within the masonry are a requirement to safely support a heavy cavity wall or a 9" wall. When no holes are made the attachment is not within the permitted 215mm and is dangerously misused and overloaded.

Back in 2013 the H.S.E website stated that the main cause of collapse during masonry alterations is overloading equipment due to the lack of awareness of the equipment capacity and underestimating the weight of loads.

Through my own research I believe the main causes of collapse are also due to the following;

1, The user making assumptions of correct use due to not understanding the misleading Strongboy instructions or verbally misinformed of how to use the equipment safely.

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2, Unknowingly decreasing the safe working load when removing a Strongboy away from the wall to avoid internal wall damage or to gain further fitting work space as no warnings are in place.

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3, A Strongboy being recommended and permitted by structural engineers even when the device is not suitable & doesn't give the correct fitting work access without dangerously overloading itself.

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4, No written guidance for Acrow props, Strongboy's or Genie lifts are provided by the retailers to falsely ease a dangerous task & to gain more sales.

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5, The user making assumptions of correct use due to no warnings or guidance being provided at the point of sale.

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6, No correct procedures of using a Strongboy are in place for the many different tasks of supporting 4″, 9″& 13″ walls or for the different sized cavity walls and due to a severe lack of guidance from the H.S.E, Istructe & the Twf.

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7, Using Strongboy's upon larger openings when the props and needles method is far safer and more suitable as they offer the correct fitting work access with fewer impeding Acrow props without dangerously overloading or without having the need to remove the opening to the full depth before a permanent support is in the final position.

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8, Compromising safety to save time and to reduce costs by using inferior S.W.L equipment and propping dangerously from only one side to avoid internal wall damage upon finished 1st floor rooms.

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9, Not knowing how to safely plan a task and then taking unnecessary risks due to not using a variety of temporary support equipment most suitable.

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10, Insufficient testing and research of the Strongboy and of similar designed products.

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11, Rushing a task through not pricing correctly.

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12, Not seeking expert temporary support advice when in doubt.

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13, Misleading instructions and no drawings of correct use are provided and no Acrow prop guidance supplied at the point of sale or hire.

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14, The H.S.E allowing misleading instructions for over twenty five years and allowing a dangerous product to be sold with fewer warnings than a claw hammer.

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15, The market monopoly of a product with a brand name that implies strength but reduces the safe working load of an Acrow prop by at least 90% without warning and is overloaded with the same amount of ease as the manufacturer's say it is to use.

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16, A product that is designed to deceive and to be misused and also increases the risk of overloading due to the long bendable tongue that exceeds the maximum 215mm eccentricity without warning.

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17, The Strongboy manufacturer making false claims and devaluing the correct method of props and needles for over thirty years.

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18, Misleading old instructions of use and misleading new instructions that have increased the maximum eccentricities by over 50% without further testing or any explanation.

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19, The H.S.E's inability to address the situation without accepting the responsibility of the fault of which they helped create in the first instance by allowing misleading Strongboy instructions and also allowing incorrect procedures for over twenty five years

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20, Not using the fully tested Brick Brace safety tool to maximise the unknown variable safe working load of all the existing propping methods due to the anti competitive practice caused by falsely easing a difficult and dangerous task.

Recommendations
All the above issues are to be addressed accordingly by the H.S.E and ISTRUCTE

New Instructions must be provided at the point of purchase/hire to raise awareness and to prevent similar misuse as seen in the photo below. (Photo taken from Google images via the web).

With over 30 years experience within the construction industry I have yet to see Strongboy's being used correctly which I believe to be due to a severe lack of correct guidance. Yes a Strongboy supports masonry but not safely, it is more luck than any structural engineer's calculations or judgement.

STRONGBOY

Designed as a cost effective labour saving device the strongboy will fit any adjustable steel builders ('ACROW') prop with a 6" or 150mm square top plate.

The strongboy is used as an adaption to an Adjustable Steel Prop to provide support to brickwork and other construction support structures.

Due to the Strongboy's robust dynamics, it can be fitted between courses on a double-skin, brick cavity wall from either side. Therefore providing a cost effective, efficient and safe construction component.

A Market Monopoly of One Product That Is Marketed As A Masonry Support for 4" to 9" walls and all cavity sized walls Is Dangerous!

When knowing every task of masonry alterations is different, a variety of temporary masonry support equipment most suitable would be used.

CHECK LIST

1

What is the nature of the task, is it remedial works or fitting a permanent support? Is it forming a new opening or increasing the size of an existing opening? Is the opening in a 4″single skin of masonry, two skins or even more? Is the opening in the outer or the inner leaf of a cavity wall or in both?

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2. **What is the age and condition of the masonry and what is the masonry material? What design (cavity or solid)? What is the size of the cavity? What thickness is the wall? Which bond is the masonry and which mortar mix, cement or lime?**

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3. **What are the existing ceiling heights? What are the size and direction of floor/joists, are they load bearing onto the wall or are they non load bearing? Do the existing floor joists impede the internal fitting access?**

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4. **What height is the opening, ground floor, first floor or higher/lower? Is a permanent support fitted underneath joists? Are the existing joists fitted within the web of the permanent support or is the permanent support fitted at the same height or below non load bearing joists?**

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5. **What opening size (including bearings) is required? Is a load-point intact? What is the total weight of the load that requires support? Which variety of lintel/s or steel/s are specified or most suitable? What's the length, depth, width, thickness and weight of the permanent support/s?**

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6. **How will the new permanent support be fed into position and how will any old lintels be removed? Which equipment or variety of temporary support equipment is designed to support the masonry correctly and will also provide sufficient fitting work access without dangerously over extending and overloading itself?**

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The more temporary support methods known, the safer and easier the different tasks of supporting masonry become.

KEEP IT SAFE!

Eight questions that all parties involved refuse to answer

1

Structural engineer's have endorsed use of the tongued prop attachment for almost thirty years, how is it possible to calculate & design a task safely when only using tongued prop attachments when the safe working load varies from 340kg down to 0kg, of which depends on the size of the Acrow prop used, which pin-hole height is used, how tightly the Acrow prop is fitted, how plumb and how far the Acrow prop is fitted from the centre of the wall"?

An explanation with correct calculations would be preferred.

2

Can you confirm and prove that the structural engineers that specify tongued prop attachments (even when they do not offer the correct fitting work space for a task without dangerously overloading themselves), has not caused the mind-set of the typical smaller builder and retailer?

3

Can you confirm that if tongued prop attachments do not require a maximum opening size or a correct procedure, then no other temporary support equipment requires it either? Or to reduce the number of the same needless reoccurring accidents should all temporary masonry support equipment be supplied with correct instructions and a correct procedure of the tasks the manufacturer's & retailer's claim they do?

4

Can you confirm that using a mixed variety of temporary support equipment is far more suitable & safer than only using tongued prop attachments for every task?

5

Figure3 part 10, in the temporary works tool kit, why is the calculation the same for permanent lintels and for temporary support when the degree of the brickwork triangle is lower, either 35 degrees in a Stretcher bond or 25 degrees in a Flemish or English bond upon temporary support, Also, Figure 3 is not the calculation when any of the three points do not exist as "suggested" in the later paragraph of part 10.

6

Can you confirm it is acceptable to change the instructions of a temporary support product and not tell anyone of the changes including the retailer's, construction organisations such as F.M.B, C.I.T.B and the hire associations? And can you confirm that the best port of call is a structural engineer for temporary design or should the

instructions read "When in any doubt take guidance from a competent person that has masonry alterations knowledge" or similar?

7

A tongued prop attachment is designed to reduce masonry damage and is marketed to reduce the number of Acrow props from the work area even though it reduces the safe working load of an Acrow prop by at least 90%. Can you confirm that using tongued prop attachments are suitable to reduce the number of Acrow props and are also safe to avoid internal 1st floor wall damage when creating an opening through both sides of a cavity wall when fitting steels upon wider openings?

8

Can you confirm that the new tongued prop attachment instructions are acceptable when they do not have maximum opening sizes and have increased the eccentricity of the Acrow prop by over 50% in some cases and can you confirm they do not require any revision? And can you also confirm the market monopoly of the tongued prop attachment and the misleading instructions have not fixed the typical builders and retailer's mind-set and stopped essential temporary masonry support equipment join the market place?

Instructions taken from the Strongboy Ltd website

STRONGBOY MASONRY SUPPORT

Prior to using any Strongboy masonry support, you should identify that this is a suitable method to carry out the intended works. If in doubt, consult a structural engineer.

You must correctly identify all loading that the Strongboys will have to support. The total load may simply be the masonry above the opening, but it will also include loads from a floor and/or a roof that is supported by the wall. Floor loading may need to include any heavy furniture in an upstairs room, a full bath, people walking on the supported floor, etc. Roof loading includes supported timbers/steelwork, roof tiles, loft mounted water tanks and the like.

It is recommended that only one single opening in any one length of wall be created at any given time.

You should check that the wall masonry and any floor/roof timbers are in good condition prior to any work being carried out as remedial work may be needed prior to the opening being altered or created.

Strongboy Masonry support is not recommended to be used to provide temporary support to unstable structures.

You should obtain competent structural engineering advice if there is any doubt about the condition of the structure or the nature of the loading, or if any unusual loads are suspected.

!!!CAUTION!!! STRONGBOYS ARE HEAVY AND MAY HAVE SOME SHARP EDGES. ALWAYS WEAR PROTECTIVE GLOVES AND APPROPRIATE PROTECTIVE CLOTHING / FOOTWEAR WHEN HANDLING !

Instructions for use:
Mark the wall in the correct position where the Strongboy is to be inserted
Scrape or grind out the mortar, or remove a brick prior to insertion of the Strongboy in the identified position. Always ensure the underside of the brick to be supported is clean and will sit flat on the blade of the Strongboy.
The Strongboy is designed for use with standard telescopic screw props with a 6" x 6" (150 x 150mm) head. Strongboys should not be used on struts as these have a much smaller head. The prop should only be placed on firm, flat, compacted ground that is capable of supporting the load. A sole board should be placed under each prop - eg 18" x 9" x 1½" (450 x 225 x 36mm)
Hold prop vertically upright with one hand close to where the intended usage is.
With your other hand holding the supporting web, tilt leading edge of Strongboy blade up approximately 30 degrees
.
IMPORTANT: Slide the rear end of the Strongboy over the top plate of the prop and hook the retaining bar at the rear end of the Strongboy over the prop plate. Ensure the prop plate is fully engaged behind the retaining bar before using!!!

Lower the leading edge of the Strongboy blade until the web bracket is located against the vertical tube of the plate and the blade of the Strongboy is horizontal.
To check the Strongboy is correctly engaged, pull the front edge of the blade down. The Strongboy should not move.
The Strongboy may now be manoeuvred into the correct position for use.
Insert the blade into the mortar space or brick hole until the blade is at least at the same depth as the rear of the brick on the leaf of the wall which is intended to be supported. Where possible the Strongboy should be inserted until the tip of the web is nearly touching the wall.
Ensuring the prop remains completely vertical and in plumb, tighten the collar of the prop until the Strongboy and prop are fully engaged with the wall and do not move. Do not over tighten as that may cause the blade to bend. Hand tight is generally sufficient. Over tightening may damage the brickwork and the prop and Strongboy and may cause the blade to slide out of the brickwork.

When using Strongboys we recommend:
Maximum load bearing capacity of 340 Kgs per unit (750lb)
Maximum safe working height 3 metres from firm base .
The distance between props should be calculated from the assessment of the loading, but in any case, it should not exceed 3ft or 900mm.
Always have the loadings checked and use the correct number of Strongboys for the job. If in doubt, you should obtain competent structural engineering advice.
If the width of the intended opening is greater than 4m we recommend that the props be horizontally laced and diagonal braced together using scaffolding poles and proprietary couplings .
The Strongboy can be use on single or double skin walls where each leaf is up to 4 ½" (112mm) thick. If double skin, the maximum cavity is 2" (50mm). Ensure the blade of the Strongboy is fully supporting the second skin.
Check that the prop is not working loose on a regular basis – eg continuously while the opening is being made, otherwise daily. Arrange the work so that the Strongboys and props are not knocked or displaced. If this could happen then lacing and bracing using scaffold poles and fittings can help prevent accidental movement (standard fittings onto the prop inner tube and 68.3mm fittings onto the outer tube).

Applications
• APPLICATIONS include:-
• Breaking out single or double skinned walls.
• Supporting damaged or uneven brickwork.
• Replacing wall ties.
• Installing R.S.J. or concrete lintels
• Installing new windows / doors or supporting loose or damaged window headers.

Please note Strongboy Ltd can provide advice on the product but does not offer a temporary works design service. Neither can we give specific project related advice. If you need advice on loading or a temporary works design you should consult a structural engineer.

THE OLD INSTRUCTIONS

(Used before NOV 2015 but still in use on the internet due to the HSE not policing/enforcing the situation in a safe or competent manner).

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STRONGBOY - INSTRUCTIONS FOR USE

1. Select the height you require for your opening and take out one or two bricks above the joint you wish to work to.

2. Place the STRONGBOY on top of the prop and adjust to your required working height.

3. For maximum safety the STRONGBOY should be placed where the handle sits against the face of the wall being supported.

4. On normal cavity walls, the maximum distance from the the centre line of the 'acrow' prop, to centre line of the cavity wall or is 215mm (9" inches). Or using the leading edge of the hammer plate as a guide. Measure 150mm to the centre of the cavity.

N.B. (Where joints do not line up in a cavity wall you may need to insert a suitable solid wedge between the loading plate and the supported structure.)

5. On single leaf walls the maximum distance from the centre of the 'acrow' prop to the centre of the wall should be 305mm. (12 inches)

6. Tighten the prop until the loading plate is is fully engaged with the brickwork and is load bearing. (DO NOT OVERTIGHTEN)

7. For wider hole on stable walls the STRONGBOYS should be positioned and maximum of 900mm apart. For less stable structures or where there are old mortar joints it may be necessary to position the STRONGBOYS closer together.

8. The maximum safe working height is 3m from finished floor level.

9. Maximum safe working load is 340 Kg

10. The STRONGBOY should only be used where the wall to be supported is adequately braced against lateral forces, e.g. a floor within 500mm of the STRONGBOY.

11. Props must be used in a VERTICAL position on a clean solid and stable floor or substrate capable of supporting the desired weight.

12. Always use STRONGBOYS in a safe and workmanlike manner.

IF IN DOUBT - CONSULT A STRUCTURAL ENGINEER.

THE NEW PROPPA INSTRUCTIONS

1. Determine the opening height. Rake or grind out the mortar joint one or two bricks above the joint in which you are working to ensure that
the *Proppa*® has clearance and will slide into the clean joint until the web of the Proppa® is against the face of the wall. Under no circumstances
should you hammer in the Proppa® as this can cause cracking!
2. Once the Proppa® is in position, locate the prop ensuring that the prop is plumb when it is tightened. ***NOTE:*** “If you are supporting a double skin
wall & the mortar joints don’t line up, carefully insert a steel wedge between the top loading plate of the Proppa® and the underside of the
brickwork to be supported. The steel wedge shall be of the same width as the top loading plate of the Proppa®.
3. Take up the load on the prop, ***DO NOT OVER-TIGHTEN! THIS IS NOT A JACKING DEVICE!***
4. For appropriate safe working load please refer to the table immediately below to determine maximum safe working load & height.

a. Table is based on 110mm brickwork with load eccentricities to centreline of prop given below.
b. Assumed eccentricity for single skin - 270mm (web against inside face of brickwork)
c. Assumed eccentricity for cavity - 350mm (web against inside face of brickwork)
d. Adequate restraint must be maintained at the top of the masonry wall – eg. slab, floor, roof pitching beam and ceiling frame,
and must be at a height not greater than 500 mm above the prop.

Acrow® Type	Prop Min Height (mm)	Prop WLL (kg) Single Skin	Cavity	Max. Prop Height (mm)	WLL (kg) Single Skin	Cavity
NO. 0	1300	570	460	1830	360	290
NO. 1	1850	550	440	2800	330	270
NO. 2	2150	540	440	3400	310	250
NO. 3	2420	530	440	3975	290	240
NO. 4	3350	500	410	4900	280	230

5. Ensure that the floor or foundation is capable of providing adequate bearing capacity for the base of the props without settlement or sliding.
6. The lateral stability at the base plate is achieved by friction between steel and concrete. For other materials, ensure an engineer checks that
there's adequate resistance to slip.
7. Consider the effects of loading on multiple levels in respect of load transfer to props and foundation at the bottom level.
8. Ensure an engineer has checked the adequacy of the masonry wall containing the proposed opening before any work commences,
including lateral resistance at the prop level during its use.
9. When using the Proppa® wall support with hollow masonry, ensure the unit is installed so that the outermost face-shell is supported.
For practical purposes, this limits the thickness of hollow masonry walls to 190 mm blockwork.
10. The prop must be oriented such that the slot in the outer tube (and holes in the inner tube) are in line with the wall, ie. ***not*** facing the wall.
11. The Proppa® wall support must be installed on the inner tube of the prop only. Ensure this is taken into account when selecting a prop to
suit the head height. Allow minimum 250mm of inner tube above the top thread of the outer tube.
12. If there's any settlement or movement of the masonry wall during the process of installing the Proppa® wall supports, removing masonry
units, installing the lintel and removing the props, check for any cracking in the masonry and conduct repairs as necessary.
13. The Proppa® wall support is designed for standard masonry bed joints of nominal 10 mm thickness. Refer to an engineer for guidelines
on use with masonry laid in thin-bed mortar.
14. The maximum spacing of Proppa wall supports is 900 mm.
15. If the prop visibly deflects, brace it and have an engineer assess its use.
16. Always use PROPPA® wall supports in a safe and workmanlike manner.

DON'T TAKE RISKS • ALWAYS CONSULT A STRUCTURAL ENGINEER FOR PROPPA® GUIDANCE

17. *General care and safety issues*

• Use Personal Protective Equipment when working with PROPPA®
• Always comply with OH&S / Work, Health & Safety regulations and any local or site-specific requirements.
• Never use PROPPA® beyond its design limitations.
• Always keep PROPPA® clean and in good working order.

• Handle PROPPA® with care and store safely. Use hand slot only when carrying, keeping hands clear at all other times.